

SQL

RAY

SCHEDULE

- RECAP / HW
- STORED PROCEDURES
- PROJECTS
- PRACTICES

ALTER TABLE STATEMENT PRACTICE

- GIVEN TABLE TRANSACTION

TID	Payer	Payee	amount	currency	timestamp	note
00001	258548	12346987	210.89	USD	2022/01/25 22:10:53	rent
00002	260789	210987321	12378.2	USD	2022/01/25 22:10:53	
00003	165399	13201498	50000	NTD	2022/01/25 22:10:54	loan

Please modify table such that it looks like this...

TID	Payer	Payee	amount	currency	Date	time	note
00001	Charlie	Annie	210.89	USD	2022/01/25	22:10:53	rent
00002	Charlie	Joy	12378.2	USD	2022/01/25	22:10:53	
00003	John	Pheobe	50000	NTD	2022/01/25	22:10:54	loan

RECAP TABLE RELATED STATEMENTS

- TO CREATE A NEW TABLE
- TO CHANGE CONTENT OF AN EXISTING TABLE
- TO ERASE CONTENTS OF A TABLE
- TO DELETE THE ENTIRE TABLE

TABLE MANIPULATION STATEMENTS -SUMMARY

- TO CREATE A NEW TABLE – **CREATE TABLE**
- TO CHANGE CONTENT OF AN EXISTING TABLE – **ALTER TABLE**
- TO ERASE CONTENTS OF A TABLE – **TRUNCATE TABLE**
- TO DELETE THE ENTIRE TABLE – **DROP TABLE**

HW

- **HERE WE GO AGAIN....**
- DESIGN A SCHEMA (MORE THAN ONE TABLE) THAT MET THE FOLLOWING REQUIREMENT AND ESTIMATE THE MEMORY SIZE OF WHICH YOU DESIGN **AND CONSTRUCT PROPER CONSTRAINTS AND DESIGN A 3-NF TABLE USING CREATE TABLE STATEMENT**
 - 4000 STUDENTS
 - CONSTRAINTS
 - GRADE MUST BE LETTER GRADE (I,E WITHIN A, B, C, D, E, F)
 - EMERGENCY NUMBER CANNOT BE BLANK
 - MUST BE ABLE TO QUERY:
 - PUBLIC ACCESSIBLE INFO:
 - STUDENT ID, START WITH 0001
 - FIRST NAME
 - LAST NAME
 - SEX
 - ENROLLMENT CLASS ID
 - LOCKED INFO:
 - HOME ADDRESS
 - EMERGENCY CONTACT NUMBER
 - GRADE

STORED PROCEDURES

- A STORED PROCEDURE IS A PREPARED SQL CODE THAT YOU CAN SAVE, SO THE CODE CAN BE REUSED OVER AND OVER AGAIN.
- SYNTAX
 - `CREATE PROCEDURE PROCEDURE_NAME
AS
SQL_STATEMENT
GO;`
 - `EXEC PROCEDURE_NAME`

STORED PROCEDURES WITH PARAMETERS

- CREATE PROCEDURE SELECTALLCUSTOMERS @CITY NVARCHAR(30)
AS
SELECT * FROM CUSTOMERS WHERE CITY = @CITY
GO;
- EXEC SELECTALLCUSTOMERS @CITY = 'LONDON';

STORED PROCEDURES WITH PARAMETERS

- CREATE PROCEDURE SELECTALLCUSTOMERS @CITY NVARCHAR(30), @POSTALCODE NVARCHAR(10)
AS
SELECT * FROM CUSTOMERS WHERE CITY = @CITY AND POSTALCODE =
@POSTALCODE
GO;
- EXEC SELECTALLCUSTOMERS @CITY = 'LONDON', @POSTALCODE = 'WA1 1DP';

SELF READING: PERMISSIONS

- <https://docs.microsoft.com/en-us/sql/relational-databases/security/permissions-database-engine?view=sql-server-ver15>

PROJECTS DUE 2/23

- THE PURPOSE FOR THIS PROJECT IS TO FAMILIARIZE WITH ALL KINDS OF STATEMENTS AND DESIGN AN OPEN-ENDED REAL-WORLD QUESTIONS.
- TEAM OF 1-2 MEMBERS
- PLEASE DESIGN A WORKABLE SYSTEM TO STORE INFORMATION AND CAN USE QUERIES TO EXTRACT DATA AND SUMMARY STATISTICS
- PLEASE NOTE THAT MAKE SURE THE USERS SHOULD NOT BE ABLE TO USE SIMPLE SQL INJECTIONS TO MAKE CHANGES OF THE EXISTING DATA STORED.
- PLEASE REFER TO SOME POPULAR SOCIAL MEDIA LIKE FACEBOOK, INSTAGRAM, OR SOME FINANCIAL APPLICATIONS SUCH AS BANKING APP., ETC, THERE ARE TONES OF RESOURCES ONLINE.
- MINIMAL REQUIREMENT:
 - 3 TABLES
 - 4 STORED PROCEDURES, AT LEAST ONE USING AGGREGATION FUNCTION
 - 3-NF
 - CREATE TABLE STATEMENTS AND PROPER CONSTRAINTS
 - (OPTIONAL) ADMINISTRATOR PRIVILEGE, NORMAL USERS